

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being cancelled.

Claims 1-20 are currently being amended.

No claims are currently being added.

This amendment amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-20 are pending in this application.

Indication of Allowable Subject Matter:

Applicants appreciate the indication of allowable subject matter made in the Office Action with respect to claims 4, 5, 12 and 13.

Claim Objections:

In the Office Action, claims 1, 2, 10 and 20 were objected to because of minor informalities noted on pages 2 and 3 of the Office Action. By way of this amendment and reply, claims 1, 2, 10 and 20 have been amended to correct those minor informalities. Other minor informalities found in these and other claims have also been corrected in this amendment and reply.

Claim Rejections – Prior Art:

In the Office Action, claims 1-3, 6-11 and 14-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,010,569 to Katagawa. This rejection is traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Katagawa discloses a communication system having a voice terminal apparatus such as a telephone exchange, an opposite-side voice terminal apparatus such as an opposite-side

telephone exchange, and a communication apparatus such as a call transmission apparatus between the voice terminal apparatus and the opposite-side voice terminal apparatus for mutual communication between the voice terminal apparatus and the opposite-side voice terminal apparatus through a communication channel via the call transmission apparatus, in which the communication apparatus (call transmission apparatus) has a signal receiving unit for receiving a DTMF signal from a voice signal from the voice terminal apparatus, a signal generating unit for generating a DTMF signal with the same code as this received DTMF signal when the DTMF signal is received by this signal receiving unit, and a signal sending unit for outputting the DTMF signal generated by the signal generating unit to the opposite-side voice terminal apparatus via the communication channel.

On the other hand, presently pending independent claim 1 is directed to a communication system having a communication apparatus connected to a voice terminal apparatus and an opposite-side communication apparatus connected to an opposite-side voice terminal apparatus and making the communication apparatus and the opposite-side communication apparatus communicate with each other through a communication channel, in which the communication apparatus has a voice coding unit for code-compressing a voice signal from the voice terminal apparatus and thereby generating voice information, a DTMF detecting unit for detecting a DTMF signal from a voice signal from the voice terminal apparatus, a DTMF coding unit for, when the DTMF detecting unit has detected a DTMF signal, generating DTMF information by coding a DTMF signal into DTMF signal transmission form, and an information outputting unit for outputting voice information generated by the voice coding unit or DTMF information generated by the DTMF coding unit to said communication channel.

The present invention has been developed to solve a situation in which, in the case of voice code-compressing of a DTMF signal as well as a voice signal by a communication apparatus on a transmission side and transmitting them to an opposite-side communication apparatus on a receiving side, for example, even if the code-compressed DTMF signal is decoded as with a voice signal on the opposite-side communication apparatus on the receiving side, the DTMF signal goes out of normal receiving, and the opposite-side voice terminal apparatus on the receiving side can not recognize the DTMF signal, the communication apparatus has a voice coding unit for code-compressing a voice signal from the voice terminal apparatus and thereby generating voice information. To accomplish this,

the invention according to presently pending independent claim 1 further has a DTMF detecting unit for detecting a DTMF signal from a voice signal from the voice terminal apparatus, a DTMF coding unit for, when the DTMF detecting unit has detected a DTMF signal, generating DTMF information by coding a DTMF signal into a predetermined form, that is, a DTMF signal transmission form, and an information outputting unit for outputting voice information generated by the voice coding unit or DTMF information generated by the DTMF coding unit to the communication channel. When the DTMF detecting unit has detected a DTMF signal, DTMF information is generated by coding this DTMF signal into a DTMF signal transmission form so that it can be recognized by the opposite-side voice terminal apparatus side, and the DTMF information is transmitted to the opposite-side communication apparatus. Therefore, such a situation in which the DTMF signal can not be recognized by the opposite-side voice terminal device on the receiving side can be resolved.

On the other hand, the subject matter of Katagawa is not directed to a communication system for mutual communication by voice code-compressing a voice signal between the voice terminal apparatus and the opposite-side voice terminal apparatus but rather to an analog communication system for mutual communication of a voice signal as well as a DTMF signal via an analog channel (communication channel) between the voice terminal apparatus and the opposite-side voice terminal apparatus. In order to solve the situation that the level of a DTMF signal is lowered according to the transmission loss of the communication channel if the channel distance of the analog channel is far, for example, the DTMF signal is received and a DTMF signal with the same code as this DTMF signal is generated so that the level is raised and the DTMF signal is outputted, the situation that the level of the DTMF signal is lowered due to transmission loss of the communication channel can be solved.

That is, the invention as recited in presently pending independent claim 1 is much different from the disclosure of Katagawa in that claim 1 is directed to a communication system for mutual communication between a communication apparatus and an opposite-side communication apparatus by voice code-compressing a normal voice signal as well as a DTMF signal, whereby such features are not disclosed or suggested by Katagawa. Therefore, presently pending independent claim 1 is not anticipated by Katagawa.

Similarly, presently pending independent claims 10, 17 and 20 recite features similar to those discussed above with respect to presently pending independent claim 1, whereby such features are not disclosed or suggested by Katagawa.

Accordingly, each of the presently pending independent claims 1, 10, 17 and 20 is patentable over the disclosure of Katagawa.

The presently pending dependent claims under rejection are patentable due to their dependencies on one of the presently pending independent claims 1, 10, 17 and 20, as well as for the specific features recited in those dependent claims.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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